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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,505	10/25/2002	Gary Steven Strumolo	202-0206 FAM	2126

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KEVIN G. MIERZWA  
ARTZ & ARTZ, P.C.  
28333 TELEGRAPH ROAD, SUITE 250  
SOUTHFIELD, MI 48034

EXAMINER
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NGUYEN, THU V

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/065,505

Applicant(s)

STRUMOLO ET AL.

Examiner

Thu Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/25/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (US 2003/0076981) in view of Tsutsumi et al (US 5,617,085).

As per claim 1-2, 7-9, 13, Smith teaches a crash assessment and safety device activation system. The system comprises: a first remote sensor 18 (fig.1); a first visual sensor 22 (fig.1); a safety device actuator and a controller receiving the first and visual signal and controlling the safety devices in response to the received signals (para 0022-0028). Smith does not explicitly teach confirming the target object based on the first object signal and the visual signal.

However, Smith teaches the capability of determining the target object using both the first remote sensor and the visual signal (para 0022-0028). Further, Tsutsumi teaches confirming the target object using both first object signal and visual signal (col.13, lines 40-64; col.14, lines 3-7, lines 61-67; col.13, lines 15-67; col.16, lines 1-24). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize both the first object signal and the visual signal of Smith to confirm the existence of an object as taught by Tsutsumi in order to enhance accuracy in detecting existence of an object.

As per claim 3-4, Smith teaches including a second remote sensor 48 or 54 (fig.2) (para 0026].

As per claim 5-6, 10-11, 12, polling the sensor to collect data from a plurality of sensors, activating a safety device when the intensity of the crash meet the specific safety device threshold would have been well known. Further, as to claim 6, Smith does not teach setting the region to be sensed by the first remote sensor of approximately 3m. However, selecting a range of activity of a radar sensor of around 3m which allow safe time for processing data would have been both known and obvious, since selecting a suitable scanning distance of detecting objects so that the processor has enough time to process data requires only routine skill in the art.

As per claim 14-15, refer to claims 1, 5-6, 12, and 9 above.

As per claim 16, Smith in combination with Tsutsumi do not explicitly teach continuously detecting objects along the course of the vehicle is running. However, since the system of Smith clearly does not stop when an object is detected, Smith in view of Tsutsumi obviously teach detecting the second object as claimed.

As per claim 17, Smith teaches setting up the width and length window containing an object using the image from the visual sensor (para 0023). Further, establishing bounding box

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from an image for recognizing objects and classifying objects would have been known, an ordinary person skill in the art would be able to apply the well known method of recognizing object from an image to recognize the target vehicle from the image of the visual sensor of Smith.

*Cited Prior Arts*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vallette et al (US 6,327,528) teaches setting safety threshold at which a safety device will be actuated (abstract).

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 305-7687, (for formal communications intended for entry)

**Or:**

(703) 305-7687 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451

Crystal Drive, Arlington. VA., Seventh Floor (Receptionist).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for this Group is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1111.



**THU V. NGUYEN**  
**PRIMARY EXAMINER**

March 5, 2004